

IONS
INVESTIGATIONS
1940 ☆
U. S. Department of Agriculture

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- The foregoing statement conveys no authority to initiate work that is not part of an administratively approved survey. Its only purpose is to provide background for the following instructions, which are of a strictly technical nature.

GENERAL INSTRUCTIONS FOR CONDUCTING INFILTROMETER INVESTIGATIONS

- (1) The objective of flood control infiltrrometer investigations shall be to obtain part of the information needed for evaluating the effect of proposed land use improvement programs on flood run-off. This requires the determination of the infiltration characteristics of complexes of soil, plant cover, and cultural treatment. The practice of removing plants and litter from the plots will, therefore, be abandoned.
- (2) Hereafter infiltrrometer investigations shall be made with pairs of Type FA infiltrmeters (12" x 30" plots) and with single units of the Type F apparatus (6' x 12' plots).
- (3) On surveys where only a limited amount of field work can be completed during the present season, first priority shall be given to obtaining conclusive data on a few of the more important complexes; particular attention being given to those for which the maximum and minimum infiltration capacities are likely to be found.
- (4) On surveys to which Type F apparatus is assigned, tests with this device shall be made at a few centrally located points in each of the more important complexes. (The complexes selected would probably be identical with those chosen under (3)).
- (5) On watersheds where Type F tests are made, the Type FA infiltrmeters shall be used to investigate complexes for which Type F data are not obtained, and to secure data on variations of the complexes studied with the Type F apparatus. For the purpose of comparison, Type FA tests should be made at the same sites as Type F tests and preferably at the same time.
- (6) On watersheds where infiltrrometer investigations have been started with the North Fork infiltrrometer, every effort shall be made to utilize the North Fork data already obtained. To make this possible, it will be necessary to establish correlations by which the previously collected North Fork results may be converted into the infiltration rates that would have been obtained with the Type FA infiltrrometer. It may be possible to do this by making tests with both infiltrmeters on a few sites representative of the major land classes of the watershed.
- (7) Tests made with the North Fork infiltrrometer on plots strictly comparable to those on which either Type FA or Type F runs are made, or similar comparisons of Type FA and Type F equipment, will yield data of value to many survey parties. For this reason, such comparative data shall be transmitted, through the channels of the chairmanship bureau, to the office of the Technical Adviser on Hydrology, where it will be summarized for immediate distribution to all field parties. Such information will greatly reduce the number of comparative tests that the individual parties will be required to make. The material sent to Washington should include reproductions of the hydrographs regularly plotted in the field, a summary of results and brief descriptions of the plots and their condition. Copies

of the original field notes will not be required. Until further notice, all available comparative data shall be sent at the end of each month.

(8) The operating procedures developed by the survey party members attending the Asheville conference shall be employed in all infiltrometer investigations until further instructions are issued.

The Hydrologic Sub-Committee will be very glad to receive technical questions and suggestions from field parties. These should be submitted through channels of the chairman agency.

These instructions are approved by the Officer In Charge, Flood Control, and are to be given effect by Flood Control personnel.

